

# EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 04026522  
PUBLICATION DATE : 29-01-92

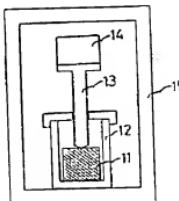
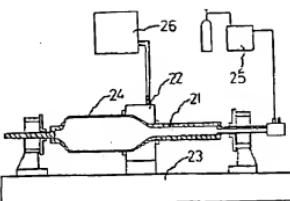
APPLICATION DATE : 22-05-90  
APPLICATION NUMBER : 02130327

APPLICANT : ASAHI GLASS CO LTD;

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INT.CL. : C03B 20/00 C03B 23/047 C03B 23/049  
C03B 23/07 // C03B 40/02

TITLE : PRODUCTION OF SYNTHETIC  
QUARTZ GLASS TUBE



**ABSTRACT :** PURPOSE: To obtain a high-purity quartz glass tube from a synthetic quartz glass block by forming the block into a thick-wall cylindrical glass, applying a gas pressure into the cylindrical glass being heated to expand the glass without contacting and drawing the glass in the longitudinal direction to thin the wall and to increase the diameter.

CONSTITUTION: This tube is produced from a synthetic quartz glass block by the following method. (1) The block is formed into a thick-wall cylindrical glass. (2) A gas pressure is applied into the cylindrical glass being heated to expand the cylindrical glass without contacting, and the cylindrical glass is drawn in its longitudinal direction to thin the wall and to increase its diameter. The cylindrical glass is preferably formed and worked (boring graphite rod 13 and graphite weight 14 for press forming) at 1600-1800°C (heating furnace 15) in a high-purity graphite mold 12 coated with a high-purity mold release agent (e.g. silicon carbide) in the first stage. The second stage is preferably carried out (thick-wall cylindrical quartz glass 21, expanded glass 24 and pressure-regulated expanding gas feeder 25) in a graphite heating element set in a high-frequency induction heating furnace 22 (high-frequency wave generator 26).

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